Journal of Community Medicine and Primary Health Care. 24 (1&2) 21-28

JOURNAL OF
COMMUNITY MEDICINE
& PRIMARY HEALTH CARE

Secondary School Adolescents' Perception of Risk in Sexual Behaviour in Rural Community Of Oyo State, Nigeria.

F. A. Okanlawon[1], M.C. Asuzu[2]

[1]Department Of Nursing, College Of Medicine, University Of Ibadan.
[2]Department Of Community Medicine, University Of Ibadan.

KEYWORDS

Adolescents, perception of risk, sexual behaviour, active participation, health promotion.

ABSTRACT

Background: Adolescents' low perception of risk associated with sexual behaviour has been identified as one of the reproductive health problems contributing to teenage pregnancy, unsafe abortion and sexually transmitted infections (STIs).

Objective: The study aimed at involving adolescents in school-based health promotion activities as a strategy to improve their perception of risk in sexual behaviour.

Method: A quasi-experimental design was adopted for this study using intervention and control groups. This was done during a six months school-based participatory peer-educators' health promotion activities in selected secondary schools in Oyo State, Nigeria. The schools were randomly allocated the intervention and control status. The intervention group was exposed to the health promotion activities, pre and post intervention data were analysed for comparison.

Results: Results showed statistically significant improvement in the perception of risk in sexual behaviour among adolescents in the intervention group compared with the control group ($P < .05$). About 60% of the adolescents in the intervention group were able to perceive danger in having many sexual partners compared with 34% in the control group. There was no statistically significant effect of gender on perception of risk in sexual behaviour ($P > .05$). This implies that among the adolescents in the intervention group who perceived danger in having multiple sexual partners, level of perception was the same for both males and females.

Conclusion: Based on the outcome of the study, it was recommended that adolescents' active participation in health promotion activities should be encouraged.

Correspondence:
E-mail: funmilayookanlawon@yahoo.com
Phone: 08055071838

INTRODUCTION

Risky sexual behaviour among adolescents has not decreased since the advent of the Human Immunodeficiency Virus (HIV) infection.[1] Factors contributing to adolescents' risky sexual behaviour include sense of non-vulnerability by adolescents who feel too young to be infected, non-availability of services in chastity education, lack of negotiation skills, poverty and lack of decision-making power limiting the ability to refuse sexual intercourse and ignorance about Sexually Transmitted Infections (STIs).[2] Nzioka[3] reported that in Kenya, adolescent boys perceived sexual activity as part of their initiation into manhood.

As reported by WHO[2], an estimated 333 million new cases of the top five most common STIs (trichomonas, chlamydia, gonorrhoea, syphilis and chancroid) occurred globally in 1995 in women and men between 15 and 49 years old. Similarly, genital warts, herpes and HIV were reported by WHO[2] to be

in epidemic proportions.

As identified by Kilcourse[4], some adolescents do not believe that they are at risk of infections, hence they perceive that they are at low risk and that it is unnecessary to take preventive measures.

Khanna[5] identified poverty, lack of education and failure of the families and communities to provide adequate information and support for chastity and reproductive health as part of factors contributing to adolescents' risky sexual behaviour. The society at times gives conflicting information about sexual relationship and reproductive health.

A study was done in rural Kenya among young schoolboys aged 15-19 years to examine their perception of risk in sexual behaviour. Findings as reported by Nzioka[3] revealed that boys perceived fathering as a sign of masculinity. According to the boys' impression, failure to have sexual intercourse was seen as carrying the risk of losing status among their peers.[3]

According to the boys as reported by Nzioka[3], "when you impregnate a girl, everybody gets to know you are a real man. Even girls start respecting you because they know you are tough." Part of the findings also revealed that contracting STIs but not HIV/AIDS, seemed acceptable as part of the process of gaining experience and thus in keeping with the dominant view of masculinity. This type of fictitious belief and erroneous perception of sexual activity encourage adolescents to indulge in risky sexual behaviour, thinking that it is normal.[3] This often leads to contacting STIs/HIV.

Another misperception by adolescents reported by Araoye[6] was that urination after sexual intercourse would get rid of any infection that might have been transmitted. Adolescent boys believed that menstrual blood served as potent source of STI/HIV transmission whereas semen in contrast, represented vitality and as such was not considered to be potentially harmful agent.[6]

Some cultures and religions also encourage early sexual activity and early marriage with the aim of avoiding sexual promiscuity and ensuring total submission to the husband[7]. Early sexual activity tends to increase adolescents' vulnerability to STIs/HIV and maternal death.[8,9]

Literature revealed that school-based health promotion activities could modify adolescents' perception of risk in sexual behaviour and motivate them to engage in self protective sexual behaviour[10]. According to Bandura's Learning Theory[12], behaviour is determined by the stimuli in one's environment. This implies that active involvement of adolescents in health promotion activities can assist them to adopt desirable sexual behaviour. Studies by Jemmott and Jemmott[10] provided evidence that behavioural interventions such as health promotion activities could prevent STIs/HIV risk associated behaviour among adolescents. This study therefore attempted to involve adolescents in school-based health promotion activities that would improve their perception of risk in sexual behaviour. Health belief model was used as framework which assumes that people's perception about a particular subject such as risk in sexual behaviour is a critical determinant of their health-related behaviour and willingness to undertake preventive health action[11,12].

METHODOLOGY

The study was carried out in eight rural community secondary schools in Saki, Oke-Ogun area of Oyo State, Nigeria. Saki consists of two Local Government Areas (LGA) out of the 10 LGA in Oke-Ogun. Saki-West is made up of many communities including Ajegunle, Otun, Sango, Kinikini, Oge, Aiyekale, Asabari, Parapo, Isale-taba and others, with headquarters at Ajegunle. Saki-East comprised Ago-Amodu, Sepeteri, Oje-Owode, Ogboro and Agbonle with the headquarters at Ago-Amodu. Adolescents in the area are more vulnerable to STIs/HIV-AIDS due to poor access to reproductive health education and services. The choice of the setting was based on the researcher's observation of high rate of teenage pregnancy, unsafe abortion and STIs among school adolescents in the area, associated with poor perception of risk in sexual behaviour.

Study design

The study employed a quasi-experimental design. The design comprised comparable intervention and control groups determined by a toss of a coin, the head represented the intervention group, other side for control group. There are three categories of public secondary schools in the study setting. The first category are the old generation schools established in the 1950s by Missionaries. The second category are those established in the late 1970s by the government. The third category are those established in the 1990s through communal effort with government assistance, bearing the name of the communities within which they were established.

For easy comparison, the second and third categories of schools with similar characteristics in both intervention and control groups were randomly selected using the statistically designed table of random sampling by Krejcie and Morgan.[13]

Sample size:

The sample size for intervention group = 254

The sample size for control group = 265

Sampling technique:

Formula: For Intervention group, N = 752

$$S = \frac{3.841 \times 752 \times 0.5 \times 0.5}{0.05^2 (751) + 3.841 \times 0.5 \times 0.5} = 254$$

For control group, N = 840

$$S = \frac{3.841 \times 840 \times 0.5 \times 0.5}{0.05^2 (839) + 3.841 \times 0.5 \times 0.5} = 265$$

Adapted from Krejcie and Morgan's table of random sampling formula

$$\frac{(S = X^2 NP(1-P)}{d^2 (N-1) + x^2 p(1-p)}$$

S = required sample size

N = the given population size

P = Population proportion that for table construction has been assumed to be .05 which yields maximum possible size required

d = degree of accuracy the value for d being .05

x^2 = table value of chi-square from one degree of freedom relative to the desired level of confidence which is 3.841 for the .95 confidence level.

Ethical consideration

Formal approval was obtained from the Ministry of Education, Oyo State signed by the Honourable Commissioner for Education (Appendix I). The commissioner communicated the approval to the authorities of the selected schools. The students were informed of their freedom not to participate or to opt out of the study at any time. They were assured of confidentiality and anonymity of data collected.

Instrument for data collection

Structured questionnaire developed from literature review were used to collect pre and post intervention data. The items in the questionnaire were divided into two sections. Section A contained information on the demographic characteristics of the students. Section B elicited information on the risk perception and factors that contribute to risky sexual behaviour.

Validity of Instrument:

Face validity of the instrument was ensured by using simple English language and clearly stated items in the questionnaire. The items were reviewed, screened and expanded by a statistician and the experts in the field of study. Reliability of the instrument was ensured by test retest using a group of 48 students from a different school but similar to the study setting and correlation result was 0.8.

Procedure for data collection and training of peer educators

The questionnaire were distributed to the selected students in both groups with the help of two research assistants. The pre-intervention responses were kept as baseline data. Thereafter, 48 volunteers from the intervention group (12 from each of the four schools) were trained for one week as peer educators in their various schools by the researcher with the help of research assistants. Their selection as peer educators was based on their teachers' advice, their interest, ability to communicate and influence their colleagues and leadership qualities. A packaged training manual adapted from UNICEF[14] was used for the training. The content of the package contained reproductive health information such as male and female reproductive organs, negotiation skills, sexual and social behaviour, perception of risk in sexual behaviour, factors that contribute to risky sexual behaviour, importance of self esteem and implications of risky sexual behaviour.

After the training, the peer educators used copies of the manual to disseminate same information to their colleagues in their various schools with the supervision of their class teachers, the researcher and the research assistants. It was a day in a week programme, for 24 weeks. The weekly activities of the education programme were recorded in a designed record sheets to ensure active participation and the number of attendants at each teaching session. At the end of 24 weeks, the same questionnaire used for baseline data were used to collect post intervention responses from the selected SS1 and SS2 students in the two groups.

LIMITATION

1. The researcher had no influence over media or over sources of information about risk of sexual behaviour which might be an advantage to the control group.

2. Teachers assisted in the selection of the peer educators and the study occurred under their watch in schools base.

ANALYSIS

Pre and post invention data were analysed, level of perception was scored by grouping together, the items on perception of risk in sexual behaviour and perception of factors that contribute to risky sexual behaviour and scored as follow: Agree = 3, Undecided = 2, Disagree = 1 where Agree is the correct answer and vice versa where Disagree is the correct answer, i.e. Disagree = 3, Undecided = 2, Agree = 1.

Simple percentages were used to indicate the proportion of adolescents with positive perception of risk in sexual behaviour and factors that contribute to risky sexual behaviour.

Variations in perception of risk in sexual behaviour between gender were assessed with Analysis of Covariance (ANCOVA) test after the data had been scored and scores pooled together. The mean values were compared.

RESULTS

The ages of the students ranged from 12 to 21 years with the mean age of 17.6 ± 2.1. For gender distribution, males were 61.8% in the intervention group and 59.2% in the control group. Females were 38.2% and 40.8% in the intervention and control groups respectively. SS1 students were 54.7% and 59.6% in the intervention and control groups respectively while SS2 were 45.3% and 40.4% in the intervention and control groups respectively.

As indicated in table 1, at pre-intervention period, there was low perception of risk in sexual behaviour in the two groups. At end-point, there was high perception of risk in sexual behaviour in the intervention group compared with control group as indicated by the end-point percentages in table 1.

As shown in table 2, at end-point, the perception of factors that contribute to risky sexual behaviour was higher among adolescents in the intervention group compared with the control group.

Table 3 shows that gender had no significant effect on perception of risk in sexual behaviour and factors that contribute to risky sexual behaviour ($F_{(1,514)} = .605$; $p > .05$). This implies that level of perception

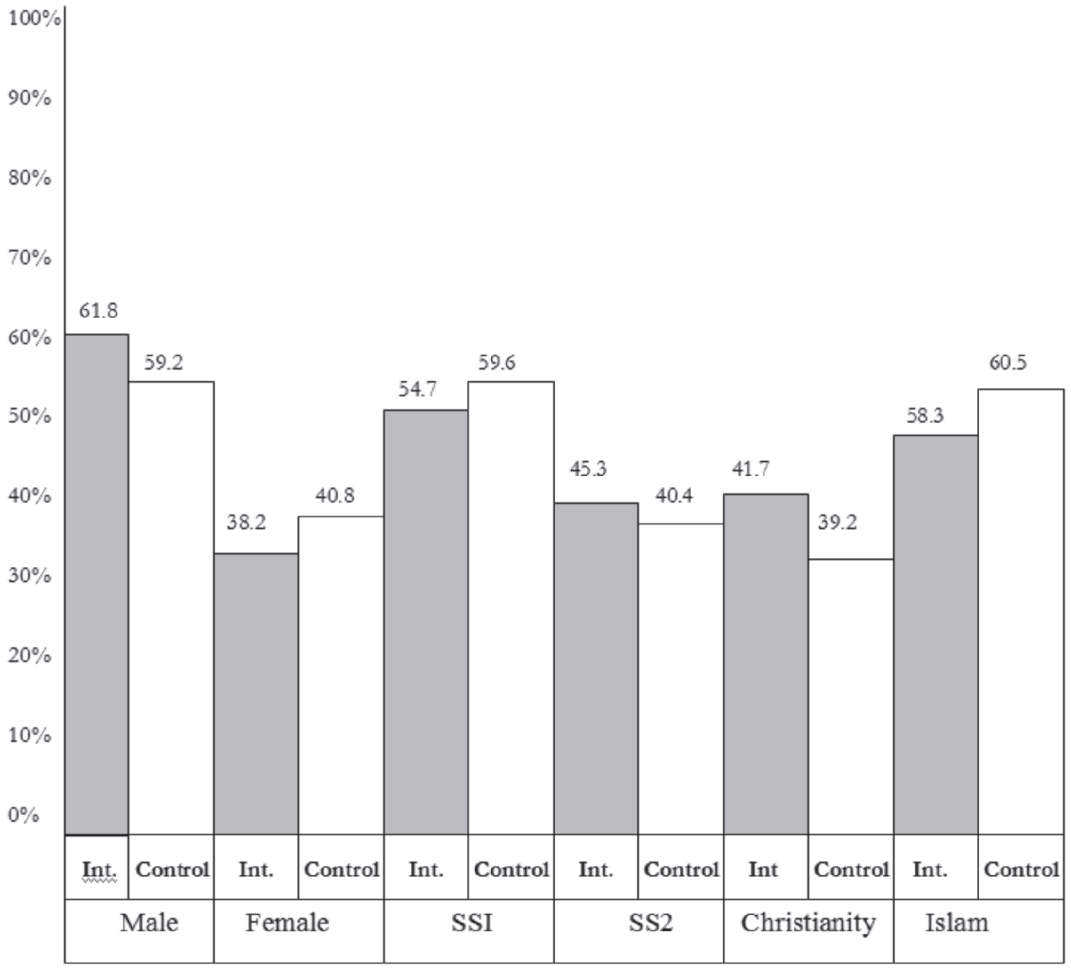

Fig 1: Demographic characteristics of the adolescents

Table 1: Proportion of students with positive perception of risk in sexual behaviour

S/N	Statement	**Intervention group** Baseline **n=254(%)**	End-point **n=254(%)**	**Control group** Baseline **n=265(%)**	End-point **n=265 (%)**
1.	First time sex can lead to pregnancy * Agree	197 (77.5)	225 (88.6)	206 (77.7)	212 (80.0)
2.	No danger in having many sex partners when contraceptive is used * Disagree	92 (36.2)	152 (59.8)	90 (34.0)	90 (34.0)
3.	Sex during safe period prevents infection * Disagree	82 (32.3)	140 (55.1)	80 (30.2)	83 (31.3)
4.	No harm in sex once in a blue moon *Disagree	46 (18.1)	198 (77.9)	55 (20.8)	56 (21.1)
5.	Sex prevents wet dreams * Disagree	55 (21.7)	114 (44.9)	65 (24.5)	60 (22.6)
6.	Occasional sex prevents menstrual pain *Disagree	56 (22.1)	127 (50.0)	65 (24.5)	70 (26.4)

Table 2: Proportion of students with positive perception of factors that contribute to risky Sexual behaviour

S/N	Statement	Intervention group		Control group	
		Baseline n=254(%)	End-point n=254(5%)	Baseline n=265(%)	End-point n=265(%)
1.	It is better to experiment sex to avoid mockery and peer pressure *Disagree	122 (48.0)	161 (63.4)	73 (27.6)	64 (24.2)
2.	Drinking and smoking is an act of maturity for adolescents * Disagree	110 (43.3)	205 (80.7)	112 (42.3)	119 (44.9)
3.	Material and financial support from sugar daddies/mummies are not harmful * Disagree	29 (11.4)	101 (39.8)	39 (14.7)	40 (15.1)
4.	Cleaning up very well after sex will prevent gonorrhoea infection *Disagree	45 (17.7)	105 (41.3)	52 (19.6)	50 (18.9)

Table 3: Summary of ANCOVA of pre and post intervention perception of risk in sexual behaviour by gender distribution

Source of variance		Hierarchical Method Sum of Squares	df	Mean square	F	Sig. (P)
Covariates	PERRISK	8851.952	1	8851.952	162.843	.000
Main effects	(Combined)	4812.413	2	2406.207	44.265	.000
	treatment group	4779.527	1	4779.527	87.925	.000*
	SEX	32.886	1	32.886	.605	.437*
2-Way interactions	treatment group* SEX	2.463E-02	1	2.463E-02	.000	.983*
Model		13664.389	4	3416.097	62.843	.000
Residual		27940.481	514	54.359		
Total		41604.871	518	80.318		

DISCUSSION

Results on perception at pre intervention showed that there was low perception of risk in sexual behaviour and factors that contribute to risky sexual behaviour among the adolescents in the intervention and control groups. The adolescents' perception was poor in relation to factors that contribute to risky sexual behaviour.

The poor perception is consistent with that of Calves and Meekers'[15] report of a study in Yaoundé, Cameroon, which found that 30% of girls aged 15-20 years have ever exchanged sex for money or gifts while 41% of young women aged 21-26 years have done so. Luke and Kurz[16] were of the opinion that when gift and money are exchanged, adolescent girls are particularly powerless to negotiate a wanted outcome.

End point result indicated difference in the perception of risk in sexual behaviour and factors that contribute to risky sexual behaviour among adolescents in the intervention compared with those in the control group. More adolescents (59.8%) were able to perceive danger in having sexual intercourse with many partners and having sexual intercourse once in blue moon (77.9%). More adolescents (55.1%) were able to realise that sexual intercourse

during what they regarded as 'safe period' could not prevent genital infection and could not prevent wet dream and menstrual pain (50.0%). The result indicates that the peer education improved adolescents' perception of risk in sexual behaviour in the intervention group.

Perceived risk is seen as a predictor of behaviour as stated in Becker's health belief model. Jemmott and Jemmott[10] reviewed 21 studies which provided clear evidence that behavioural interventions could curb STIs/HIV risk-associated sexual behaviour among adolescents in community settings. The result of this study disagrees with the misconception that exposing adolescents to information about sexual risk reduction would encourage them to engage in sexual activity.

In relation to gender, end point result showed that level of perception of risk in sexual behaviour was the same in both males and females as indicated by the summary of ANCOVA in table 3. This suggests that the intervention improved perception of risk in sexual behaviour equally in male and female adolescents. This will make the adoption of health related behaviour easier for the adolescents as stated in Bandura social learning theory that individuals engage in preventive health behaviour based on perceived vulnerability, severity and benefits.[12]

CONCLUSION/RECOMMENDATION

Adolescents' active participation in the intervention programme helped them to perceive risks in their sexual behaviour and they were then able to modify their sexual behaviour. It had significant positive effect on adolescents' ability to resist peer pressure for sexual demand, ability to appreciate self value and ability to communicate confidently with parents on sexual matters. Most importantly, the programme reduced the frequency of sexual intercourse among adolescents. It is hoped that this would reduce the rate of teenage pregnancy, abortion and school drop out.

Given this fact, it was recommended that in school adolescents should be encouraged to participate actively in peer led health promotion education programmes which should be an on-going event in both primary and secondary schools where adolescents are mostly found. The same exercise should be extended to out-of-school adolescents because they are equally vulnerable to the risk of STIs/HIV through their risky sexual behaviour.

REFERENCES

1. Villarruel, A.M., Jemmott, L.S. Howard, M. Taylor, L. and Bush, E. Practice what we preach? HIV knowledge, beliefs and behaviours of adolescents and adolescent peer educators. *Journal of the Association of Nurses in AIDS Care*. 1998, 9. 5; 61-72.

2. WHO Sexual relations among young people in developing countries: evidence from WHO case studies, 2001, Geneva.

3. Nzioka, C. Perspectives of adolescent boys on the risks of unwanted pregnancy and sexually transmitted infections, Kenya, *Reproductive Health Matters*. 2001, 9; 108-117.

4. Kilcourse, T. Social marketing interventions for adolescent sexual health: results of operations research projects in Botswana, Cameroon, Guinea and South Africa. *AIDS Mark*. 2000, 1-14.

5. Khanna, J. Promoting the sexual and reproductive health needs and rights of adolescents. *Progress in reproductive health research*. 2002, 58. 2-3.

6. Araoye, M. Sexual behaviour patterns and contraceptive choice. University of Ilorin teaching hospital, Ilorin, Nigeria. *Sexual relations among young people in developing countries; evidence from WHO case studies*. 1995, WHO .Ed. Geneva.

7. Falaye, F. V. Perspective of child abuse and child sexual abuse in Nigeria. *Paper presented at CHISAP round table on child sexual abuse*, 1998, Gateway Hotel, Abeokuta, Nigeria.

8. Adeyefa, I. Adolescent female self-perception, nutrition and reproductive health. *Social Sciences and Reproductive Health Research Network*. 1998, 3, 8-10.

9. Federal Ministry of Health *National reproductive health policy and strategy to achieve quality reproductive and sexual health for all Nigerians*. Federal Ministry of Health, Abuja, Nigeria. 2001, 3-5.

10. Jemmott, J.B. and Jemmott, L.S. *HIV behavioural interventions for adolescents in community settings*. Handbook of HIV prevention. Kluwer Academic/Plenum Publishers, New York, 2000, 103-127.

11. Harvey, G. Loftus-Hills, A. Rycroft-Malone, J. Titchen, A. Kitson, A. McCormark, B. and Seers, K. Getting evidence into practice: the role and function of facilitation. *Journal of Advanced Nursing*. 2002, 37 6. 577-588.

12. Bandura, A. *Social Learning Theory,* Prentice Hall, NJ, U.S.A. 1997.

13. Krejcie, R.C. and Morgan, D.W. Determining sample size for research activities. Educational and Psychological measurement 1970, 30; 607-610.

14. UNICEF. NYSC reproductive health and HIV/AIDS prevention project. Manual for training of trainers for peer education. 2002, 1-175.

15. Calves, A. and Meekers, D. Gender differentials in premarital sex, condom use and abortion: *A case study of Yaounde, Cameroon,* Washington, D.C: PSI Research Division working paper. 1997, No. 10.

16. Luke, N. and Kurz, K. Cross-generational and Transactional Sexual Relations in Sub-Saharan Africa: Prevalence of behaviour and implications for negotiating safer sexual practices. Washington D.C.: TCRW and PSI. 2002.